



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1421; Directorate Identifier 2014-NM-177-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 767-300 and -300F series airplanes. This proposed AD was prompted by reports of fatigue cracking on airplanes with Aviation Partners Boeing winglets installed. This proposed AD would require a high frequency eddy current (HFEC) inspection for cracking of the lower outboard wing skin, and repair or modification if necessary. This proposed AD would also require one of three follow-on actions: repeating the HFEC inspections; modifying certain internal stringers and oversizing and plugging the existing fastener holes of the lower wing; or modifying the external doubler/tripler and doing repetitive post-modification inspections. We are proposing this AD to prevent fatigue cracking in the lower outboard wing skin, which could result in failure and subsequent separation of the wing and winglet and consequent reduced controllability of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Aviation Partners Boeing, 2811 S. 102nd Street, Suite 200, Seattle, WA 98168; telephone 206-762-1171; Internet <https://www.aviationpartnersboeing.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1421; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Allen Rauschendorfer, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6487; fax: 425-917-6590; email: Allen.Rauschendorfer@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-1421; Directorate Identifier 2014-NM-177-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received reports of fatigue cracking in the lower outboard wing skin at the inboard fastener of stringer L-9.5 on Model 767-300 airplanes with Aviation Partners Boeing winglets installed. The cracks were found at the fastener holes common to the inboard end of the outboard stringer L-9.5 on the left- and right-hand wings. Investigation revealed that these were fatigue cracks related to Aviation Partners Boeing STC ST01920SE winglet retrofit kit installations. If not corrected, these cracks could extend to adjacent structure and could lead to reduced load carrying capability in the lower skin. Later investigation revealed more cracking along the lower wing skin as a result of fatigue due to higher-than-predicted fastener loads and skin stress peaking at the inboard end of stringer L-9.5. These conditions, if not corrected, could result in failure and subsequent separation of the wing and winglet, and consequent reduced controllability of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014. The service information describes procedures for inspecting for cracking of the external surface of the lower outboard wing skin, and repair or modification if necessary. The service information also includes certain follow-on actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Difference Between this Proposed Rule and the Service Information.”

Difference between Proposed Rule and Service Information

Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 140 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs – Required Actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$35,700

Estimated costs – Optional Actions

Action	Labor cost	Parts cost	Cost per product
Repetitive inspections	3 work-hours X \$85 per hour = \$255 per inspection cycle	\$0	\$255
Repair/Modification	262 work-hours X \$85 per hour = \$22,270	\$0	\$22,270
Terminating Modification	262 work-hours X \$85 per hour = \$22,270	\$0	\$22,270

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2015-1421; Directorate Identifier 2014-NM-177-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 767-300 and -300F series airplanes, certificated in any category, with Aviation Partners Boeing winglets installed; as identified in Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of fatigue cracking in the lower outboard wing skin at the inboard fastener of stringer L-9.5 on airplanes with winglets installed per Supplemental Type Certificate ST01920SE. We are issuing this AD to prevent fatigue cracking in the lower outboard wing skin, which could result in failure and subsequent separation of the wing and winglet and consequent reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection and Repair or Modification and Post-Repair or Modification Inspections

At the applicable time specified in paragraph 1.E., “Compliance,” of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j) of this AD: Do a high frequency eddy current (HFEC) inspection for cracking of the lower outboard wing skin, as specified in paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Groups 1 and 2 airplanes: Do an internal HFEC inspection at the inboard fasteners of stringer L-9.5, in accordance with PART 1 of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014; and do the applicable actions required by paragraph (g)(1)(i) or (g)(1)(ii) of this AD.

(i) If any cracking is found, before further flight, do the repair or modification specified in paragraph (h) of this AD.

(ii) If no cracking is found, do the applicable actions specified in paragraph (g)(1)(ii)(A), (g)(1)(ii)(B), or (g)(1)(ii)(C) of this AD at the time specified in paragraph 1.E., “Compliance,” of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014.

(A) Repeat the HFEC inspection.

(B) Do a preventive modification of the external doubler/tripler filler and stringer L-6.5, in accordance with PART 2 through 6, or PART 8, as applicable, of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014. If PART 8 was done, do repetitive HFEC inspections for cracking of the lower outboard wing skin common to the external doubler/tripler repair, in accordance with PART 9 of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j)(2) of this AD. If any cracking is

found: Before further flight, do a repair or modification using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(C) Do a repair or modification in accordance with PART 8, and do repetitive HFEC inspections for cracking of the lower outboard wing skin common to the external doubler/tripler repair, in accordance with PART 9 of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j)(2) of this AD. If any cracking is found: Before further flight, do a repair or modification using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(2) For Group 3 airplanes: Do an internal HFEC inspection at the inboard fasteners of stringer L-9.5, in accordance with PART 7a of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014. Do an external HFEC inspection at the inboard fasteners of stringer L-6.5 in accordance with PART 7b of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014; and do the applicable actions required by paragraph (g)(2)(i) or (g)(2)(ii) of this AD, at the time specified in paragraph 1.E., "Compliance," of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014.

(i) If any cracking is found: Before further flight, do a repair or modification using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(ii) If no cracking is found: Repeat the HFEC inspections at the time specified in paragraph 1.E., "Compliance," of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014.

(h) Terminating Modification and Repair and Post-Repair or Modification Inspections

Modification of the external doubler/tripler filler and stringer L-6.5, in accordance with PART 2 through PART 6, or repair or modification in accordance with PART 8, of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j)(2) of this AD, terminates the repetitive inspections specified in paragraph (g)(1)(ii)(A) of this AD, provided the conditions specified in paragraphs (h)(1) and (h)(2) of this AD are met. If any cracking is found: Before further flight, do a repair or modification using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(1) The repair or modification must be done within the applicable time specified in paragraph 1.E., “Compliance,” of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j) of this AD.

(2) Repetitive post-repair or modification inspections for cracking of the lower outboard wing skin common to the external doubler/tripler repair must be done in accordance with PART 9 of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, within the applicable time specified in paragraph 1.E., “Compliance,” of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, except as required by paragraph (j)(2) of this AD. If any cracking is found: Before further flight, do a repair or modification using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(i) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using the

service information identified in paragraph (i)(1), (i)(2), or (i)(3) of this AD; which is not incorporated by reference in this AD.

(1) Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 2, dated January 23, 2014.

(2) Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 4, dated April 22, 2014.

(3) Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 6, dated August 15, 2014.

(j) Exceptions to Service Information Specifications

(1) Where paragraph 1.E., “Compliance,” of Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, specifies a compliance time “after the initial issue date on this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Aviation Partners Boeing Service Bulletin AP767-57-010, Revision 7, dated November 4, 2014, specifies to contact Boeing for repair instructions: Before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (l)(1) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(I) Related Information

(1) For more information about this AD, contact Allen Rauschendorfer, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6487; fax: 425-917-6590; email: Allen.Rauschendorfer@faa.gov.

(2) For service information identified in this AD, contact Aviation Partners Boeing, 2811 S. 102nd Street, Suite 200, Seattle, WA 98168; telephone 206-762-1171; Internet <https://www.aviationpartnersboeing.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on May 13, 2015.

Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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